

CLAIMS

WE CLAIM:

1. A computer-readable medium having computer-executable instructions for performing the step of exposing an interface for providing communication with a demultiplexer object, the interface including:

- an Initialize method to configure the demultiplexer object;
- a SetPresentationDescriptor method to dynamically set an active presentation descriptor on the demultiplexer object;
- a ProcessInput method to provide a new input muxed stream to the demultiplexer object;
- a ProcessOutput method to retrieve at least one elementary stream from an active presentation; and
- a Flush method to flush currently queued input and output samples.

2. The computer-readable medium of claim 1 wherein the interface further comprises a GetPresentationDescriptor method to retrieve a clone of the currently active presentation descriptor on the demultiplexer object.

3. The computer-readable medium of claim 2 wherein the GetPresentationDescriptor method includes a presentation descriptor.

4. The computer-readable medium of claim 1 wherein the interface further comprises a `GetPendingPresentationDescriptor` method to retrieve the next pending presentation.

5. The computer-readable medium of claim 4 wherein the `GetPendingPresentationDescriptor` method includes a pending presentation descriptor.

6. The computer-readable medium of claim 1 wherein the `Initialize` method includes parameters, the parameters comprising:

a muxed stream descriptor;

a selected media type for the muxed stream descriptor;

an array of major types of elementary streams; and

a count of major types in the array of major types.

7. The computer-readable medium of claim 1 wherein the `SetPresentationDescriptor` method includes a pointer to a presentation descriptor object.

8. The computer-readable medium of claim 1 wherein the `ProcessInput` method includes a pointer to a sample object.

9. The computer-readable medium of claim 8 wherein the `ProcessInput` method further includes a return value having a new presentation flag.

10. The computer-readable medium of claim 9 having further computer executable instructions for performing the steps comprising:
 - if the new presentation flag has a TRUE value:
 - calling a GetPendingPresentationDescriptor method to retrieve the next pending presentation;
 - selecting desired streams; and
 - calling the SetPresentationDescriptor method to enable processing of samples from the demultiplexer's input queue.
11. The computer-readable medium of claim 1 wherein the ProcessOutput method includes a stream identifier and a pointer to a pointer to a sample object.
12. The computer-readable medium of claim 11 wherein the ProcessOutput method further includes an output return value.
13. The computer-readable medium of claim 12 wherein the output return value includes one of an end of stream error code and a no more data error code.
14. The computer-readable medium of claim 1 wherein the interface takes multiplexed data as an in-memory buffer of data.
15. The computer-readable medium of claim 14 wherein the multiplexed data has a format comprising at least one of Digital Video, MPEG2, and ASF.

16. A computer-readable medium having stored thereon an Initialize data structure for use in a demultiplexer, comprising:
- a first field containing a header;
 - a second field containing a muxed stream descriptor;
 - a third field containing a selected media type of the muxed stream descriptor;
 - a fourth field containing an array of major types of elementary streams;
- and
- a fifth field containing a count of major types in the array of major types.
17. A computer-readable medium having stored thereon a SetPresentationDescriptor data structure for use in a demultiplexer, comprising:
- a first field containing a header; and
 - a second field containing a presentation descriptor.
18. A computer-readable medium having stored thereon a GetPresentationDescriptor data structure for use in a demultiplexer, comprising:
- a first field containing a header; and
 - a second field containing a presentation descriptor.

19. A computer-readable medium having stored thereon a
GetPendingPresentationDescriptor data structure for use in a demultiplexer, comprising:
 - a first field containing a header; and
 - a second field containing a pending presentation descriptor.
20. A computer-readable medium having stored thereon a ProcessInput data
structure for use in a demultiplexer, comprising:
 - a first field containing a header; and
 - a second field containing a pointer to a sample object.
21. A computer-readable medium having stored thereon a ProcessOutput data
structure for use in a demultiplexer, comprising:
 - a first field containing a header;
 - a second field containing a stream identifier; and
 - a third field containing a pointer to a point to a sample object.